

HONORABLE JOHN C. COUGHENOUR

UNITED STATES DISTRICT COURT  
WESTERN DISTRICT OF WASHINGTON  
AT SEATTLE

WILD FISH CONSERVANCY,

Plaintiff,

v.

COOKE AQUACULTURE PACIFIC,  
LLC,

Defendant.

Case No. 2:17-cv-01708-JCC

FIRST DECLARATION OF JAMES PARSONS  
IN OPPOSITION TO PLAINTIFF'S FIRST  
MOTION FOR PARTIAL SUMMARY  
JUDGMENT

NOTE ON MOTION CALENDAR:  
March 15, 2019

I, James Parsons, declare as follows:

1. I am currently general manager of Cooke Aquaculture Pacific, LLC ("Cooke").

In that role I oversee all of Cooke's Atlantic Salmon farming operations in the State of Washington. I have held this position since September 2018. I am over the age of 18, make this declaration based upon my personal knowledge, and I am competent to testify as to the matters herein.

**My Background in Aquaculture**

2. I have worked continuously in the field of finfish aquaculture for approximately 40 years. Since 2016, I have served as the President of the National Aquaculture Association,

FIRST DECLARATION OF JAMES PARSONS IN  
OPPOSITION TO PLAINTIFF'S FIRST MOTION FOR  
PARTIAL SUMMARY JUDGMENT —1

Case No. 2:17-cv-01708-JCC

**NORTHWEST RESOURCE LAW PLLC**

101 Yesler Way, Suite 205  
Seattle, WA 98104  
206.971.1564

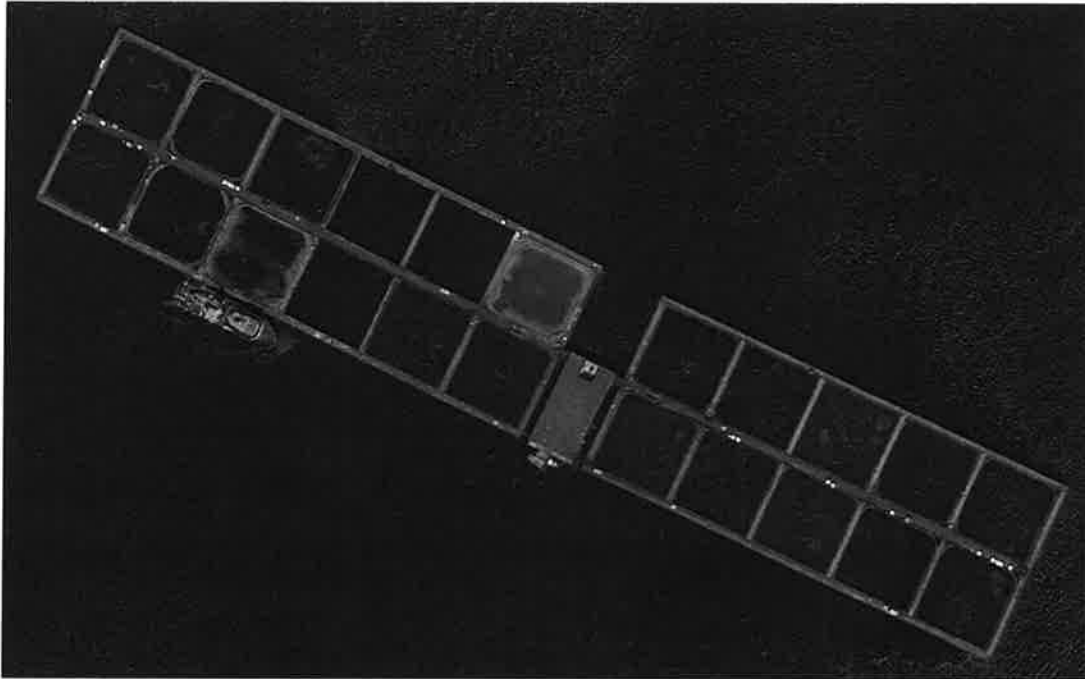
1 the leading non-profit organization that supports the establishment of governmental programs  
2 that further the interests of aquaculture.

3 3. In 1979 I received a Bachelor of Science in fisheries from Humboldt State  
4 University. From 1979 to 1982 I worked as an aquaculture biologist for Weyerhaeuser. In 1982  
5 I returned to school and in 1984 received a Master of Science degree in genetics from  
6 Washington State University. From 1984 to 1992, I worked as a research geneticist for Clear  
7 Springs Trout, a company focused on raising trout. From 1992 to 1998, I worked as the Director  
8 of Research and Development for Blue Lakes Trout, another trout farming company. From 1998  
9 to 2017, I worked as executive vice president for Troutlodge, Inc., which is the global leader in  
10 the production of viable trout eggs for hatchery use. From October 2017 to September 2018 I  
11 worked as Aquaculture Operations Manager for the Jamestown S’Klallam Tribe.

12 4. On February 28 and March 1, 2019, I sat as Cooke’s designated Rule 30(b)(6)  
13 witness in this litigation. To prepare for that deposition, I traveled to all of Cooke’s aquaculture  
14 facilities (those that are operating and those that are closed) and further familiarized myself with  
15 each facility’s operation. I am regularly at these facilities, but these trips were for the specific  
16 purpose of learning how Cooke and its predecessors operated these sites from 2012 through  
17 2017. In addition to my in-person fact finding, I spent seven days in the offices of Northwest  
18 Resource Law, PLLC, reviewing documents related to the historic operations of Cooke’s  
19 facilities. Where questions as to historic operations arose, I spoke with longtime company  
20 employees to get answers. In addition to spending seven days in the law offices of Northwest  
21 Resource Law, PLLC, I spent many hours alone reviewing thousands of pages of documents in  
22 preparation for that deposition. I base my testimony below on this exhaustive review of  
23 company records, my 40 years of finfish aquaculture experience, as well as my own efforts to  
24 fully familiarize myself with all Cooke operations since taking over the position of general  
25 manager.  
26

## General Description of Cooke's Net-pens

5. Cooke is in the business of Atlantic Salmon net-pen aquaculture. Historically, the company operated eight Atlantic Salmon net-pen facilities in Puget Sound. A net-pen facility is a widely used and relatively simple aquaculture facility. As laid out, Cooke's farms have a shape similar to an ice cube tray. The picture below is an aerial image of Cooke's Clam Bay facility, which illustrates this and represents the general design of the other facilities.



6. Each net-pen facility has four main components: a floating walkway system, a protective "predator net," fish-containing "stock nets," and a mooring system. As can be seen from the picture above, the walkway system forms a grid of squares ("pens") like the top of the ice cube tray. The stock nets then descend from the pens below the water line to create areas that contain the fish. The stock nets are made of small enough mesh to let water and dissolved oxygen pass through but keep fish inside. The predator net forms the outer area of the pen system, descending out through the water from the square. The predator net surrounds and descends to a depth below the stock nets so that it fully encloses the stock net. The predator net has much larger mesh and is held in place and away from the stock nets by a pipe frame. The

1 predator net protects the stock nets from seals, sea lions, and floating debris. The mooring  
 2 system consists of shackles, chains, ropes, and anchors that connect to the walkway system and  
 3 hold the farm in place.

4 7. Net-pen facilities are widely used across the globe, and their maintenance and  
 5 operation are the subject of global standards utilized by Cooke. Under these standards, the entire  
 6 farm is designed to be able to flex with waves and currents. Thus, the walkway system is not a  
 7 rigid system, but a series of pieces connected by joints or hinges to ensure that the facility can  
 8 handle wave action and current loads.

### 9 **Cypress Site 2 Collapse and Termination of Atlantic Salmon Net-Pen Farms**

10 8. Before I joined Cooke, the company operated a net-pen facility known as Cypress  
 11 Site 2. Cypress Site 2 was completely destroyed during a collapse event in August 2017. The  
 12 remains of Site 2 were removed in a massive salvage effort following that collapse. Today, there  
 13 is nothing at Cypress Site 2 – no walkways, pens, nets, anchor systems, or any remaining debris  
 14 from the collapse that occurred in August 2017.

15 9. Cooke has no intention of rebuilding Cypress Site 2. Even if Cooke wanted to  
 16 rebuild Cypress Site 2, it could never legally accomplish that goal. Each net-pen facility requires  
 17 an aquatic lease from the Washington State Department of Natural Resources (“DNR”), because  
 18 the net-pens are situated over and anchored to state-owned aquatic lands that are managed by  
 19 DNR. DNR has terminated Cooke’s lease for Cypress Site 2. Rebuilding Cypress Site 2 would  
 20 also require a series of permits, including a shoreline permit from Skagit County, and approvals  
 21 from the U.S. Army Corps of Engineers, which are not possible to obtain given DNR’s  
 22 termination of the Site 2 lease. Moreover, in 2018, the Washington State Legislature passed HB  
 23 2957, which strictly prohibits DNR from ever again issuing, renewing, or extending a lease for  
 24 Atlantic Salmon aquaculture. HB 2957 also prohibits the Washington State Department of  
 25 Ecology (“Ecology”) and Washington State Department of Fish and Wildlife (“WDFW”) from  
 26 issuing any permits for Atlantic Salmon aquaculture to any facility that did not have an active

1 lease as of the date the bill became law. Effectively, the prohibition of DNR renewing, issuing,  
 2 or extending leases for Atlantic Salmon aquaculture and this prohibition on Ecology and WDFW  
 3 issuing permits phases out Atlantic Salmon aquaculture in Washington over the next few years.

4 10. DNR has also terminated leases for three of Cooke's other net-pen facilities  
 5 (Cypress Sites 1 and 3 and Port Angeles). The remaining four facilities are on phase-out  
 6 schedules and are winding down their production of Atlantic Salmon in light of HB 2957,  
 7 because DNR is not authorized to issue, renew, or extend those leases if the sites are used for  
 8 Atlantic Salmon aquaculture. After many decades of operation at their present locations, there is  
 9 legally no path forward for Atlantic Salmon aquaculture in the state of Washington.

10 11. In light of the legal impossibility of rebuilding Site 2, in December, Cooke  
 11 requested that Ecology terminate the National Pollution Discharge Elimination System  
 12 ("NPDES") permit for Cypress Site 2. Ecology has received Cooke's final letter terminating the  
 13 NPDES permit but has not yet issued its final termination because Cooke is completing the site  
 14 closure monitoring that is required.

#### 15 **Changes Following Cypress Site 2 Collapse**

16 12. The backbone of Cooke's maintenance and inspection program has always been  
 17 its employees. From their first day on the job, employees are taught to take pride in their facility  
 18 and to ensure that it is always in "ship shape." Many of Cooke's employees have made a life-  
 19 long career working at the farms and take great pride in a job well done and a facility well  
 20 maintained. As any good employee would do, they learn to recognize when something is wrong  
 21 or out of place. They become constantly vigilant and respond to maintenance needs immediately.  
 22 While there are many layers of formalized inspections, Cooke's most important maintenance tool  
 23 is ensuring that its employees are identifying and addressing concerns in real time.

24 13. Following the Cypress Site 2 collapse, Cooke implemented and updated various  
 25 procedures at its remaining farms to ensure that the Site 2 collapse could not occur at those  
 26 farms. One action taken by Cooke was to update its Pollution Prevention Plan in October 2017,

1 to ensure that Cooke was creating and maintaining complete records of the many maintenance  
2 and inspection activities that it conducts at its farms.

3 14. As part of my role as General Manager, and in preparation for the recent 30(b)(6)  
4 deposition, I have spent a substantial amount of time on Cooke's implementation of and  
5 compliance with the October 2017 Pollution Prevention Plan (and Cooke's permits). I have also  
6 spent a significant amount of time learning about how Cooke historically complied with its  
7 previous pollution prevention plans that are required under its NPDES permits. Cooke has  
8 followed the same general maintenance and inspection procedures both before and after the  
9 October 2017 Plan was put into place. There are, however, two major differences between the  
10 October 2017 Plan and the prior plan. First, the October 2017 Plan requires Cooke to complete  
11 two new inspection forms to track its inspections. Those same inspections were occurring before  
12 the October 2017 Plan, and were and are being tracked in each site's daily logs, dive logs,  
13 weekly reports, monthly safety audits and compliance checklists, and various other forms. They  
14 are now also recorded in the two new forms. Second, the October 2017 Plan made one change in  
15 how inspections of anchors below 100 feet of water occur. Specifically, the Plan now requires  
16 that a contract diver or ROV (remotely operated vehicle) conduct a "visual inspection" of  
17 mooring components that are below 100 feet of water. In the past, Cooke inspected these  
18 anchors using on-site, in-house dive teams. Cooke also inspected anchors by pulling them to the  
19 surface with vessels and by analyzing anchor lines, which will show very easily whether there is  
20 a below surface issue. Almost all below water mooring components were visually inspected by  
21 divers on approximately twice per year, even those below 100 feet. There was a single site (Port  
22 Angeles) where, because of the significant depth of the water, Cooke could not visually inspect  
23 the anchors as they were situated on the bottom using on-site divers. Thus, for those anchors  
24 Cooke conducted inspections of the anchor system's functionality, consistent with the NPDES  
25 permit, which identifies certain components that require visual inspections and others that do not  
26 require visual inspections. Anchors do not require visual inspections, and there are numerous



1 reasons why Ecology would not include such a requirement, including the fact that the anchors  
 2 themselves often need to be buried in sediment to function properly, and pulling them annually  
 3 for inspections would result in disturbing the normal function of the anchors. Despite no such  
 4 requirement, Cooke incorporated the contract diver/ROV visual inspection requirement in its  
 5 October 2017 Plan to alleviate any question about the condition of mooring lines and anchors, if  
 6 visible, at significant depth.

7 15. Several other changes resulted from the Cypress Site 2 event. As part of a  
 8 collaborative regulatory action, DNR and Ecology have implemented a weekly net condition  
 9 reporting program. This program requires Cooke to submit weekly reports to DNR, including  
 10 video footage of all its nets to allow the regulators to inspect their condition. Each net is also  
 11 “graded” on cleanliness to ensure proper maintenance is occurring. This grading system was  
 12 utilized by Cooke prior to the 2017 Cypress Site 2 event, but no formal reporting was required by  
 13 the agencies. DNR also now requests that Cooke submit a confirmation video showing the  
 14 condition of 2-4 nets, randomly selected by DNR, every month during the summer and every  
 15 other month during the winter. In addition, DNR hired a marine engineer to inspect all Cooke  
 16 facilities, and Cooke worked cooperatively with DNR on those inspections and addressed any  
 17 issues identified by that marine engineer. And, as Cooke restocks its facilities, it is using newly-  
 18 gathered current data to re-engineer its mooring systems to ensure they are up to the latest ISO  
 19 standard for such facilities.

## 20 **How Cooke Tracks Fish**

21 16. One of the most important things to a commercial fish farmer is maintaining an  
 22 accurate fish inventory. Tracking fish inventory allows a farmer to project profits and market  
 23 fish in advance of a final piece-count (i.e., how many fillets you can actually promise to sell to a  
 24 buyer). It also allows farmers to generate detailed data that allows them to make projections  
 25 about typical site mortality to ensure that a proper stocking regime is put in place to minimize  
 26 food wastage, maximize efficient of production of the farms, or to make site adjustments to

1 address those conditions. It also allows farmers to make projections about future feed  
2 investments and track how fish weights and mortality respond to adverse environmental  
3 conditions. Inventories also allow for the identification of fish escapes or predation, which cut  
4 into profit and expose companies to crushing environmental liabilities in addition to social and  
5 political backlash.

6 17. There are many hundreds of Atlantic salmon fish farms across the globe. They  
7 are commonplace in Maine, British Columbia, Chile, Scotland, New Brunswick, Norway, Nova  
8 Scotia, New Zealand, and many other places. To survive in today's competitive fish farming  
9 environment, a company must have a detailed and accurate fish accounting database. Cooke  
10 uses a state-of-the-art program called FishTalk to track its fish inventory.

11 18. To explain how FishTalk tracks Cooke's fish inventory, we have included  
12 excerpts of FishTalk reports in **Exhibit 1**. These reports are for our Hope Island site and  
13 describe a snapshot of information (from December 28, 2015 through January 31, 2016) to  
14 illustrate for the Court what information is collected, recorded, and maintained. The excerpts  
15 included as Exhibit 1 were produced in this case pursuant to the protective order because they  
16 constitute confidential proprietary business information about Cooke's tracking, monitoring,  
17 categorizing, and growing fish. They were Bates numbered COOKE\_CWA\_00189282.  
18 Because they contain confidential proprietary business information, the public version of these  
19 exhibits is redacted to protect that information. I have executed a separate declaration to be filed  
20 under seal with unredacted versions of this excerpt.

21 19. As you can see in Exhibit 1, the data is generally organized by each pen (called  
22 "Unit" with an identifying number at a site – Hope Island had 10 pens which correspond to Units  
23 1 through 10). Each pen at each site has its own data set. For each actual day (identified as  
24 "Closing Date"), extensive data is then recorded. The "opening count" provides the number of  
25 fish in the pen on that date, which is the total of fish that were stocked in that cage when fish  
26 were first introduced minus prior subtractions for fish lost from that pen, through harvest,



1 mortality, or escape. (There are other columns for fish loss due to transfer or other  
 2 circumstances; because Cooke does not generally transfer fish from one pen to another, this field  
 3 is not used but does appear in the report.) Then, the day's loss of fish or addition of fish are  
 4 recorded: the number of fish mortality is tracked, including by suspected cause of mortality (for  
 5 instance, due to predators, disease, or low dissolved oxygen) and the number of fish escapes is  
 6 tracked. If fish are added to a pen, that is also recorded. The opening count minus the fish lost  
 7 (usually from mortality) and plus the fish gained (rare) leads to the closing count. (Other  
 8 information, such as water temperature and dissolved oxygen levels, are also recorded.) The  
 9 "closing count" for a day then becomes the "opening count" for the next day. The process is  
 10 repeated each day for each pen at each farm until the fish are harvested.

11         20. FishTalk tracks fish inventory from arrival at a farm until harvest. Each  
 12 individual pen is stocked with a specific number of smolts (juvenile salmon), which are counted  
 13 using automatic scanners at the upland hatchery facility. This input number is entered into  
 14 FishTalk. While the fish are being raised, Cooke sends divers into each pen three or more days a  
 15 week to remove mortalities that sink to the bottom of the pens. When brought to the surface,  
 16 Cooke staff determine why each individual fish died. Causes of death are of many types and  
 17 include mechanical damage (i.e., tides push a weak fish into the nets where it drowns); algae  
 18 blooms that suffocate the fish by depleting oxygen in the cages; predator hits (i.e., a seal or sea  
 19 lion swipes at a fish resting against the side of the stock net, wounding the fish and causing its  
 20 death); and various diseases. Cooke staff record the cause of death of each fish, record it in  
 21 FishTalk, and take necessary actions to reduce mortality.

22         21. Predation loss is a term of art in fish farming, and generally describes the number  
 23 of mortalities that are caused by predators. As described above, each facility has a sturdy, large  
 24 mesh predator net that surrounds and protects a smaller mesh stock net. The fish are in the stock  
 25 net. Occasionally, a seal or sea lion will enter the predator net. Once inside, they can be easily  
 26 and immediately seen by staff under the floating walkways, either because they must surface for

1 air or because of the reaction of the fish in the nets to a nearby predator. If a predator “is in the  
 2 system” or “enters the net,” (i.e., is inside the predator net system) staff work to ensure the safe  
 3 exit of the animal and begin to immediately search for the cause of the entry by the predator,  
 4 which may include a breach of the predator net. When a predator enters the predator net, it can  
 5 impact mortality in two ways. First, some fish rest or swim very close to the stock net; in such a  
 6 case the predator may swipe or bite the fish through the net, wounding the fish and resulting in  
 7 its death. Second, the predator can swim to the bottom of the net and attempt to chew on  
 8 mortalities that sink to the bottom of the stock net. As one would imagine, seals and sea lions  
 9 swimming around the stock nets cause panic amongst the fish. Fish do not grow well under  
 10 stress. Thus, not only do Cooke’s employees look for seals and sea lions that end up inside the  
 11 predator net, but they also watch the fish to see if they are acting in a manner that suggests  
 12 predation stress. Cooke can do this both by surface observation, including observing the fish  
 13 during their daily feedings, but also by utilizing underwater video cameras that are installed in  
 14 the cages and routinely monitored.

15 22. Predation presents a major risk to the viability of any farm. As a result, Cooke  
 16 tracks even the threat of predation in great detail. If seals or sea lions are spotted, their presence  
 17 is noted in the daily log. If they enter the predator net, that action is noted in the daily log. If  
 18 they harm a fish, that mortality is logged into Fishtalk and also included in reports sent weekly  
 19 throughout the company.

20 23. We have included in **Exhibit 2** the set of weekly reports that correspond to the  
 21 FishTalk excerpts in Exhibit 1 and are themselves reports that are run from FishTalk. (As the  
 22 Court can see, on a weekly basis, each farm tracks and circulates throughout the company a  
 23 “weekly production report,” which describes the key weekly metrics for that site, including the  
 24 number and cause of mortalities, feeding efficiency, environmental factors such as temperature,  
 25 oxygen levels, and notes about what is generally occurring on the farms, such as “minor  
 26 predation issues in pen 10 at the beginning of the week, which we resolved immediately” or “fish

1 are doing very well after doing maintenance [sic] on the pred and rearing [stock] nets.”) As the  
2 Court can see from just these few reports, Cooke keeps precise track of every factor that can  
3 impact the farm, including mortality, feeding, fish weight, maintenance, and predation.

4 24. The excerpts included as Exhibit 2 were produced in this case pursuant to the  
5 protective order because they constitute confidential proprietary business information about  
6 Cooke’s tracking, monitoring, categorizing, and growing fish. They were Bates numbered  
7 COOKE\_CWA\_00174047, 00173994, 00174107, 00174049, and 00187166. Because these  
8 excerpts contain confidential proprietary business information, the public version of these  
9 exhibits are redacted to protect that information. I have executed a separate declaration to be  
10 filed under seal with unredacted versions of this excerpt.

11 25. FishTalk also allows Cooke to track and record fish escapes and detect any  
12 escapes at the end of a production cycle (when the fish are harvested). At the end of each cycle,  
13 Cooke compares its input, mortality, and final harvest numbers. These numbers should line up,  
14 within the mechanical deviation or inherent error from the highspeed scanners which count the  
15 fish as they leave the hatchery. When the smolts (which are only several inches) are introduced  
16 into the pens at the beginning of the production cycle, they are vacuumed up by the hundreds of  
17 thousands and counted by a highspeed scanner, then placed in trucks, transferred to boats, and  
18 then placed in the pens. That scanner has a margin of error identified by its manufacturer.  
19 Aquaculturists globally have always tracked releases by ensuring that fish-in minus fish-out falls  
20 within the hatchery scanners margin of error. Absent large escapes like what occurred at  
21 Cypress Site 2, Cooke has always met this standard, which means it does not have fish escapes  
22 from its sites.

23 26. FishTalk is a good way to “check work,” but escape detection and prevention is  
24 also (and best) achieved in real time on the farm sites. The best way to detect an escape is  
25 through visual observation of the fish and the nets. Staff continuously watch the fish to see if  
26 they are behaving strangely, if cage density is unexpectedly falling, or if feed is being left

1 uneaten. When you work on a fish farm, you learn to understand what is and what is not normal  
 2 fish behavior, what a full pen looks like, and how much feed you should be able to feed a pen of  
 3 fish. Additionally, divers are in the water at least three days a week inspecting each cage for  
 4 mortalities and holes. If a hole were ever to develop in the stock net, it would be immediately  
 5 identified. Additionally, net cleaners are constantly working on ensuring stock nets are clean.  
 6 These cleaners would also identify any escape holes.

7       27. The waters surrounding Cooke's facilities are some of the most studied in the  
 8 world with respect to wild salmon production. What this means is that many fisheries biologists,  
 9 including state, federal and university scientists, as wells as tribal and commercial fishers, are  
 10 constantly monitoring the marine and fresh waters surrounding Cooke's facilities for presence of  
 11 all species of salmon. If there were regular, small escapes of fish from Cooke's facilities, those  
 12 would be detected by these individuals, who are also in close contact with Cooke. Cooke is  
 13 required by WDFW to heat-shock its fish to mark the otolith (the ear bone of the fish) which  
 14 creates a unique identifier of Cooke's fish. So, if an Atlantic Salmon was recovered from the  
 15 wild, there are procedures to examine that fish to determine whether it was from one of Cooke's  
 16 facilities, and not, for example, from the numerous Atlantic Salmon farms to the north in  
 17 Canada. Except for the Site 2 collapse and escape in August 2017, Cooke has not received any  
 18 reports of its fish being captured and identified since at least 2010.

19 **MS222 Is Not a "Disease Control Chemical"**

20       28. I have been informed that WFC has made allegations that Cooke has utilized  
 21 MS222 as a disease control chemical. I have worked in finfish aquaculture for approximately 40  
 22 years. MS222 is an extremely widely used chemical in the industry. It is not a "disease control  
 23 chemical." It has no disease fighting or preventing characteristics. It is used to "knock out" a  
 24 fish that is to be handled. As anyone who has gone fishing can attest, it is very difficult to safely  
 25 handle a fish that is violently flopping around. MS222 knocks the fish out and allows safe  
 26 handling for tasks such as weighing or measuring the fish to update the site inventory.

1 Sworn to under penalty of perjury of the laws of Louisiana, at New Orleans, Louisiana,  
2 this 9th day of March, 2019.  
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James Parsons

FIRST DECLARATION OF JAMES PARSONS IN  
OPPOSITION TO PLAINTIFF'S FIRST MOTION FOR  
PARTIAL SUMMARY JUDGMENT —13

Case No. 2:17-cv-01708-JCC

**NORTHWEST RESOURCE LAW PLLC**

101 Yesler Way, Suite 205

Seattle, WA 98104

206.971.1564

# Exhibit 1



	Year class	Site	Closing Date	Opening Count	Closing Count	Transfer in count in period	Transfer out count in period	Deviation count in period	Deviation percent in period	Harvested count (incl discards) in period	Gross harvested biomass, incl. discards [lb] in period	Gross harvested average weight [lb] in period	Culling count in period	Mortality count in period	Mortality count Transport in period	Mortality count Predator in period	Mortality count Disease - Yellow Mouth in period	Mortality count Unspecified in period	Mortality count Pinheads in period	Mortality count Disease Vibrios in period
Unit: 01	2015	Hope Island	28-Dec-15	CONFIDENTIAL- 17CV01708																
	2015	Hope Island	29-Dec-15																	
	2015	Hope Island	30-Dec-15																	
	2015	Hope Island	31-Dec-15																	
	2015	Hope Island	01-Jan-16																	
	2015	Hope Island	02-Jan-16																	
	2015	Hope Island	03-Jan-16																	
	2015	Hope Island	04-Jan-16																	
	2015	Hope Island	05-Jan-16																	
	2015	Hope Island	06-Jan-16																	
	2015	Hope Island	07-Jan-16																	
	2015	Hope Island	08-Jan-16																	
	2015	Hope Island	09-Jan-16																	
	2015	Hope Island	10-Jan-16																	
	2015	Hope Island	11-Jan-16																	
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	2015	Hope Island	29-Jan-16																	
	2015	Hope Island	30-Jan-16																	
	2015	Hope Island	31-Jan-16																	

Mortality count Deformed in period	Mortality count Grilse in period	Mortality count Mechanical Damage in period	Mortality count Disease - SRS (Salmon Rickettsia Septicae mia) in period	Mortality count Samples in period	Mortality count Low DO in period	Mortality count Disease - Furunculosis in period	Mortality count Gill Damage in period	Mortality count Grading Damage in period	Mortality count Disease - BKD (Bacterial Kidney Disease) in period	Temperat ure (all depths) Avg [°C] in period	Oxygen (all depths) Avg [mg/l] in period	Escape count in period
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CONFIDENTIAL- 17CV01708

											Gross harveste d biomass, incl. discards [lb] in period	Gross harveste d average weight [lb] in period			Mortality count Transport in period	Mortality count Predator in period
	Year class	Site	Closing Date	Opening Count	Closing Count	Transfer in count in period	Transfer out count in period	Deviation count in period	Deviation percent in period	Harveste d count (incl discards) in period			Culling count in period	Mortality count in period		
Unit: 02	2015	Hope Island	28-Dec-15													
	2015	Hope Island	29-Dec-15													
	2015	Hope Island	30-Dec-15													
	2015	Hope Island	31-Dec-15													
	2015	Hope Island	01-Jan-16													
	2015	Hope Island	02-Jan-16													
	2015	Hope Island	03-Jan-16													
	2015	Hope Island	04-Jan-16													
	2015	Hope Island	05-Jan-16													
	2015	Hope Island	06-Jan-16													
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	2015	Hope Island	22-Jan-16													
	2015	Hope Island	23-Jan-16													
	2015	Hope Island	24-Jan-16													
	2015	Hope Island	25-Jan-16													
	2015	Hope Island	26-Jan-16													
	2015	Hope Island	27-Jan-16													
	2015	Hope Island	28-Jan-16													
	2015	Hope Island	29-Jan-16													
	2015	Hope Island	30-Jan-16													
	2015	Hope Island	31-Jan-16													

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Mortality count Disease - Yellow Mouth in period	Mortality count Unspecifi ed in period	Mortality count Pinheads in period	Mortality count Disease - Vibriosis in period	Mortality count Deforme d in period	Mortality count Grilse in period	Mortality count Mechanic al Damage in period	Mortality count Disease - SRS (Salmon Rickettsia Septicae mia) in period	Mortality count Samples in period	Mortality count Low DO in period	Mortality count Disease - Furuncul osis in period	Mortality count Gill Damage in period	Mortality count Grading Damage in period	Mortality count Disease - BKD (Bacterial Kidney Disease) in period	Temperat ure (all depths) Avg [°C] in period	Oxygen (all depths) Avg [mg/l] in period	Escape count in period
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**CONFIDENTIAL- 17CV01708**

[illegible]

Mortality count Disease - Yellow Mouth in period	Mortality count Unspecifi ed in period	Mortality count Pinheads in period	Mortality count Disease - Vibriosis in period	Mortality count Deforme d in period	Mortality count Grilse in period	Mortality count Mechanic al Damage in period	Mortality count Disease - SRS (Salmon Rickettsia Septicae mia) in period	Mortality count Samples in period	Mortality count Low DO in period	Mortality count Disease - Furuncul osis in period	Mortality count Gill Damage in period	Mortality count Grading Damage in period	Mortality count Disease - BKD (Bacterial Kidney Disease) in period	Temperat ure (all depths) Avg [°C] in period	Oxygen (all depths) Avg [mg/l] in period	Escape count in period
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**CONFIDENTIAL- 17CV01708**



											Gross harveste d biomass, incl. discards [lb] in period	Gross harveste d average weight [lb] in period				
	Year class	Site	Closing Date	Opening Count	Closing Count	Transfer in count in period	Transfer out count in period	Deviation count in period	Deviation percent in period	Harveste d count (incl discards) in period			Culling count in period	Mortality count in period	Mortality count Transport in period	Mortality count Predator in period
Unit: 04	2015	Hope Island	28-Dec-15													
	2015	Hope Island	29-Dec-15													
	2015	Hope Island	30-Dec-15													
	2015	Hope Island	31-Dec-15													
	2015	Hope Island	01-Jan-16													
	2015	Hope Island	02-Jan-16													
	2015	Hope Island	03-Jan-16													
	2015	Hope Island	04-Jan-16													
	2015	Hope Island	05-Jan-16													
	2015	Hope Island	06-Jan-16													
	2015	Hope Island	07-Jan-16													
	2015	Hope Island	08-Jan-16													
	2015	Hope Island	09-Jan-16													
	2015	Hope Island	10-Jan-16													
	2015	Hope Island	11-Jan-16													
	2015	Hope Island	12-Jan-16													
	2015	Hope Island	13-Jan-16													
	2015	Hope Island	14-Jan-16													
	2015	Hope Island	15-Jan-16													
	2015	Hope Island	16-Jan-16													
	2015	Hope Island	17-Jan-16													
	2015	Hope Island	18-Jan-16													
	2015	Hope Island	19-Jan-16													
	2015	Hope Island	20-Jan-16													
	2015	Hope Island	21-Jan-16													
	2015	Hope Island	22-Jan-16													
	2015	Hope Island	23-Jan-16													
	2015	Hope Island	24-Jan-16													
	2015	Hope Island	25-Jan-16													
	2015	Hope Island	26-Jan-16													
	2015	Hope Island	27-Jan-16													
	2015	Hope Island	28-Jan-16													
	2015	Hope Island	29-Jan-16													
	2015	Hope Island	30-Jan-16													
	2015	Hope Island	31-Jan-16													

CONFIDENTIAL- 17CV01708

Mortality count Disease - Yellow Mouth in period	Mortality count Unspecifi ed in period	Mortality count Pinheads in period	Mortality count Disease - Vibriosis in period	Mortality count Deforme d in period	Mortality count Grilse in period	Mortality count Mechanic al Damage in period	Mortality count Disease - SRS (Salmon Rickettsia Septicae mia) in period	Mortality count Samples in period	Mortality count Low DO in period	Mortality count Disease - Furuncul osis in period	Mortality count Gill Damage in period	Mortality count Grading Damage in period	Mortality count Disease - BKD (Bacterial Kidney Disease) in period	Temperat ure (all depths) Avg [°C] in period	Oxygen (all depths) Avg [mg/l] in period	Escape count in period
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**CONFIDENTIAL- 17CV01708**

											Gross harveste d biomass, incl. discards [lb] in period	Gross harveste d average weight [lb] in period				
	Year class	Site	Closing Date	Opening Count	Closing Count	Transfer in count in period	Transfer out count in period	Deviation count in period	Deviation percent in period	Harveste d count (incl discards) in period			Culling count in period	Mortality count in period	Mortality count Transport in period	Mortality count Predator in period
Unit: 05	2015	Hope Island	28-Dec-15	CONFIDENTIAL- 17CV01708												
	2015	Hope Island	29-Dec-15													
	2015	Hope Island	30-Dec-15													
	2015	Hope Island	31-Dec-15													
	2015	Hope Island	01-Jan-16													
	2015	Hope Island	02-Jan-16													
	2015	Hope Island	03-Jan-16													
	2015	Hope Island	04-Jan-16													
	2015	Hope Island	05-Jan-16													
	2015	Hope Island	06-Jan-16													
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	2015	Hope Island	09-Jan-16													
	2015	Hope Island	10-Jan-16													
	2015	Hope Island	11-Jan-16													
	2015	Hope Island	12-Jan-16													
	2015	Hope Island	13-Jan-16													
	2015	Hope Island	14-Jan-16													
	2015	Hope Island	15-Jan-16													
	2015	Hope Island	16-Jan-16													
	2015	Hope Island	17-Jan-16													
	2015	Hope Island	18-Jan-16													
	2015	Hope Island	19-Jan-16													
	2015	Hope Island	20-Jan-16													
	2015	Hope Island	21-Jan-16													
	2015	Hope Island	22-Jan-16													
	2015	Hope Island	23-Jan-16													
	2015	Hope Island	24-Jan-16													
	2015	Hope Island	25-Jan-16													
	2015	Hope Island	26-Jan-16													
	2015	Hope Island	27-Jan-16													
	2015	Hope Island	28-Jan-16													
	2015	Hope Island	29-Jan-16													
	2015	Hope Island	30-Jan-16													
	2015	Hope Island	31-Jan-16													

Mortality count Disease - Yellow Mouth in period	Mortality count Unspecifi ed in period	Mortality count Pinheads in period	Mortality count Disease - Vibriosis in period	Mortality count Deforme d in period	Mortality count Grilse in period	Mortality count Mechanic al Damage in period	Mortality count Disease - SRS (Salmon Rickettsia Septicae mia) in period	Mortality count Samples in period	Mortality count Low DO in period	Mortality count Disease - Furuncul osis in period	Mortality count Gill Damage in period	Mortality count Grading Damage in period	Mortality count Disease - BKD (Bacterial Kidney Disease) in period	Temperat ure (all depths) Avg [°C] in period	Oxygen (all depths) Avg [mg/l] in period	Escape count in period
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**CONFIDENTIAL- 17CV01708**

	Year class	Site	Closing Date	Opening Count	Closing Count	Transfer in count in period	Transfer out count in period	Deviation count in period	Deviation percent in period	Harvested count (incl discards) in period	Gross harvested biomass, incl. discards [lb] in period	Gross harvested average weight [lb] in period	Culling count in period	Mortality count in period	Mortality count Transport in period	Mortality count Predator in period
Unit: 06	2015	Hope Island	28-Dec-15													
	2015	Hope Island	29-Dec-15													
	2015	Hope Island	30-Dec-15													
	2015	Hope Island	31-Dec-15													
	2015	Hope Island	01-Jan-16													
	2015	Hope Island	02-Jan-16													
	2015	Hope Island	03-Jan-16													
	2015	Hope Island	04-Jan-16													
	2015	Hope Island	05-Jan-16													
	2015	Hope Island	06-Jan-16													
	2015	Hope Island	07-Jan-16													
	2015	Hope Island	08-Jan-16													
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	2015	Hope Island	11-Jan-16													
	2015	Hope Island	12-Jan-16													
	2015	Hope Island	13-Jan-16													
	2015	Hope Island	14-Jan-16													
	2015	Hope Island	15-Jan-16													
	2015	Hope Island	16-Jan-16													
	2015	Hope Island	17-Jan-16													
	2015	Hope Island	18-Jan-16													
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	2015	Hope Island	27-Jan-16													
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	2015	Hope Island	29-Jan-16													
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CONFIDENTIAL- 17CV01708

Mortality count Disease - Yellow Mouth in period	Mortality count Unspecifi ed in period	Mortality count Pinheads in period	Mortality count Disease - Vibriosis in period	Mortality count Deforme d in period	Mortality count Grilse in period	Mortality count Mechanic al Damage in period	Mortality count Disease - SRS (Salmon Rickettsia l Septicae mia) in period	Mortality count Samples in period	Mortality count Low DO in period	Mortality count Disease - Furuncul osis in period	Mortality count Gill Damage in period	Mortality count Grading Damage in period	Mortality count Disease - BKD (Bacterial Kidney Disease) in period	Temperat ure (all depths) Avg [°C] in period	Oxygen (all depths) Avg [mg/l] in period	Escape count in period
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**CONFIDENTIAL- 17CV01708**



											Gross harveste d biomass, incl. discards	Gross harveste d average weight			Mortality count	Mortality count
	Year class	Site	Closing Date	Opening Count	Closing Count	Transfer in count in period	Transfer out count in period	Deviation count in period	Deviation percent in period	Harvested count (incl discards) in period	[lb] in period	[lb] in period	Culling count in period	Mortality count in period	Mortality count Transport in period	Mortality count Predator in period
Unit: 07	2015	Hope Island	28-Dec-15	CONFIDENTIAL- 17CV01708												
	2015	Hope Island	29-Dec-15													
	2015	Hope Island	30-Dec-15													
	2015	Hope Island	31-Dec-15													
	2015	Hope Island	01-Jan-16													
	2015	Hope Island	02-Jan-16													
	2015	Hope Island	03-Jan-16													
	2015	Hope Island	04-Jan-16													
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	2015	Hope Island	26-Jan-16													
	2015	Hope Island	27-Jan-16													
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	2015	Hope Island	29-Jan-16													
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Mortality count Disease - Yellow Mouth in period	Mortality count Unspecifi ed in period	Mortality count Pinheads in period	Mortality count Disease - Vibriosis in period	Mortality count Deforme d in period	Mortality count Grilse in period	Mortality count Mechanic al Damage in period	Mortality count Disease - SRS (Salmon Rickettsia l Septicae mia) in period	Mortality count Samples in period	Mortality count Low DO in period	Mortality count Disease - Furuncul osis in period	Mortality count Gill Damage in period	Mortality count Grading Damage in period	Mortality count Disease - BKD (Bacterial Kidney Disease) in period	Temperat ure (all depths) Avg [°C] in period	Oxygen (all depths) Avg [mg/l] in period	Escape count in period
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											Gross harveste d biomass, incl. discards	Gross harveste d average weight	Culling	Mortality	Mortality	Mortality
	Year class	Site	Closing Date	Opening Count	Closing Count	Transfer in count in period	Transfer out count in period	Deviation count in period	Deviation percent in period	Harvested count (incl discards) in period	[lb] in period	[lb] in period	count in period	count in period	Transport in period	Predator in period
Unit: 08	2015	Hope Island	28-Dec-15	<b>CONFIDENTIAL- 17CV01708</b>												
	2015	Hope Island	29-Dec-15													
	2015	Hope Island	30-Dec-15													
	2015	Hope Island	31-Dec-15													
	2015	Hope Island	01-Jan-16													
	2015	Hope Island	02-Jan-16													
	2015	Hope Island	03-Jan-16													
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	2015	Hope Island	11-Jan-16													
	2015	Hope Island	12-Jan-16													
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	2015	Hope Island	14-Jan-16													
	2015	Hope Island	15-Jan-16													
	2015	Hope Island	16-Jan-16													
	2015	Hope Island	17-Jan-16													
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	2015	Hope Island	19-Jan-16													
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	2015	Hope Island	27-Jan-16													
	2015	Hope Island	28-Jan-16													
	2015	Hope Island	29-Jan-16													
	2015	Hope Island	30-Jan-16													
	2015	Hope Island	31-Jan-16													

Mortality count Disease - Yellow Mouth in period	Mortality count Unspecifi ed in period	Mortality count Pinheads in period	Mortality count Disease - Vibriosis in period	Mortality count Deforme d in period	Mortality count Grilse in period	Mortality count Mechanic al Damage in period	Mortality count Disease - SRS (Salmon Rickettsia Septicae mia) in period	Mortality count Samples in period	Mortality count Low DO in period	Mortality count Disease - Furuncul osis in period	Mortality count Gill Damage in period	Mortality count Grading Damage in period	Mortality count Disease - BKD (Bacterial Kidney Disease) in period	Temperat ure (all depths) Avg [°C] in period	Oxygen (all depths) Avg [mg/l] in period	Escape count in period
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**CONFIDENTIAL- 17CV01708**

[illegible]

Mortality count Disease - Yellow Mouth in period	Mortality count Unspecifi ed in period	Mortality count Pinheads in period	Mortality count Disease - Vibriosis in period	Mortality count Deforme d in period	Mortality count Grilse in period	Mortality count Mechanic al Damage in period	Mortality count Disease - SRS (Salmon Rickettsia Septicae mia) in period	Mortality count Samples in period	Mortality count Low DO in period	Mortality count Disease - Furuncul osis in period	Mortality count Gill Damage in period	Mortality count Grading Damage in period	Mortality count Disease - BKD (Bacterial Kidney Disease) in period	Temperat ure (all depths) Avg [°C] in period	Oxygen (all depths) Avg [mg/l] in period	Escape count in period
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**CONFIDENTIAL- 17CV01708**



[illegible]

Mortality count Disease - Yellow Mouth in period	Mortality count Unspecifi ed in period	Mortality count Pinheads in period	Mortality count Disease - Vibriosis in period	Mortality count Deforme d in period	Mortality count Grilse in period	Mortality count Mechanic al Damage in period	Mortality count Disease - SRS (Salmon Rickettsia Septicae mia) in period	Mortality count Samples in period	Mortality count Low DO in period	Mortality count Disease - Furuncul osis in period	Mortality count Gill Damage in period	Mortality count Grading Damage in period	Mortality count Disease - BKD (Bacterial Kidney Disease) in period	Temperat ure (all depths) Avg [°C] in period	Oxygen (all depths) Avg [mg/l] in period	Escape count in period
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**CONFIDENTIAL- 17CV01708**

## Exhibit 2



## Hope Island Weekly Report 12/28/15-1/3/16

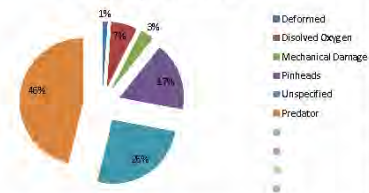
Unit	Accumulated input count	Average weight input [g]	Accumulated input biomass [kg]	Opening count	Opening average weight input [g]	Opening biomass [kg]	Mortality count	Mortality rate [%]	Acc. mortality	Acc. survival rate [%]
01	CONFIDENTIAL- 17CV01708									
02										
03										
04										
05										
06										
07										
08										
09										
10										

Unit	Closing count	Closing average weight [g]	Closing biomass [kg]	Closing real density [kg/m <sup>3</sup> ]	Deviation: # of fish	Deviation in period: # of fish [%]	Culled count in period	Feed used in period [kg]	SFR in period	Calc. feed use in period [kg]	Economical FCR in period	Acc. economical FCR (in cl.)	Gross growth [%]	SFR in period	TGC in period	Accumulate d TGC	Avg. temperature [°C]	Dynamic Red L	0	0
01	CONFIDENTIAL- 17CV01708																			
02																				
03																				
04																				
05																				
06																				
07																				
08																				
09																				
10																				

### Mortality

Unit	Mortality count	Mortality rate [%]	Acc. mortality rate	Acc. survival rate
01	CONFIDENTIAL- 17CV01708			
02				
03				
04				
05				
06				
07				
08				
09				
10				

Mortality Breakdown



Mortality Breakdown By Cause Per Pen

CONFIDENTIAL- 17CV01708

We continued to have minor predation issues in pen 10 at the beginning of the week, which we resolved immediately. No signs of predation at the end of the week

### Feeding

Unit	Feed used in period [kg]	Closing average weight [g]	SFR in period	Calc. feed use in period [kg]	Economical FCR in period	Acc. economical FCR (in cl.)	Previous Week SFR Comparison %
01	CONFIDENTIAL- 17CV01708						
02							
03							
04							
05							
06							
07							
08							
09							
10							

This week SFR

CONFIDENTIAL- 17CV01708

Last week SFR

CONFIDENTIAL- 17CV01708

All feed rates are up! Fish are doing very well after doing maintenance on the prod and rearing nets

### Stock Status

Unit	Closing count	Closing average weight [g]	Closing biomass [kg]	Closing real density [kg/m <sup>3</sup> ]	TGC in period
01	CONFIDENTIAL- 17CV01708				
02					
03					
04					
05					
06					

Closing Avg  
Wt.

Opening Avg  
Wt.

% Growth

Pen  
01  
02  
03  
04  
05  
06

SFR in period Last Week SFR

CONFIDENTIAL- 17CV01708

Pen  
Pen 1  
Pen 2  
Pen 3  
Pen 4  
Pen 5  
Pen 6  
Pen 7  
Pen 8  
Pen 9  
Pen 10

SFR  
CONFIDENTIAL- 17CV01708

B1	CONFIDENTIAL- 17CV01708
B2	
B3	
B4	
B5	
B6	
B7	
B8	
B9	
B10	

Fish looking good, no issues to report.

## Environment

	12/28/15				
Temp.	8.1				
Oxygen Average	7.3				
Oxygen Max	8.2				
Oxygen Min	6.5				

Environmentals holding pretty steady, D.O.'s are high and the water is clear.

## Summary

Electrical finished  
 Diving on Pred net  
 Lights installed  
 General Duties  
 Feed rates going up!  
 Had a few hole in pred net after heavy winds, working on pred main.  
 Roaring net maint.  
 HAPPY NEW YEAR!!!

## Great

Electrical finished  
 DO Consistently high  
 Feed rates up!  
 Buttoning up pred  
 Lights are on!

## Disappointing

Predation at the beginning of the week

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## Hope Island Weekly Report

1/4-1/10/16

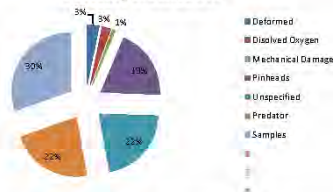
Unit	Accumulated input count	Average weight at input [g]	Accumulated input biomass [kg]	Closing count	Closing average weight biomass [kg]	Closing count	Mortality count	Mortality rate [%]	Acc. mortality	Acc. survival rate [%]
01	CONFIDENTIAL- 17CV01708									
02										
03										
04										
05										
06										
07										
08										
09										
10										

Unit	Closing count	Closing average weight [g]	Closing biomass [kg]	Closing real density [kg/m <sup>3</sup> ]	Deviation # of fish	Deviation in period # of fish [%]	Culled count in period	Feed used in SFR in period [kg]	Calc. feed use in period [kg]	Economical RCR in period	Acc. economical RCR (end)	Gross growth [%]	SFR in period	TGC in period	Accumulated TGC	Avg. temperature [°C]	Dynamic Ref L	D	B
01	CONFIDENTIAL- 17CV01708																		
02																			
03																			
04																			
05																			
06																			
07																			
08																			
09																			
10																			

## Mortality

Unit	Mortality count	Mortality rate [%]	Acc. mortality rate [%]	Acc. survival rate [%]
01	CONFIDENTIAL- 17CV01708			
02				
03				
04				
05				
06				
07				
08				
09				
10				

Mortality Breakdown



Mortality Breakdown By Cause Per Pen

CONFIDENTIAL- 17CV01708

Some sample mortality  
Predation Pen 10: found small hole at casings on Pred net

## Feeding

Unit	Feed used in period [kg]	Closing average weight [g]	SFR in period	Calc. feed use in period [kg]	Economical RCR in period	Acc. economical RCR (end)	Deviation Week SFR Comparison %
01	CONFIDENTIAL- 17CV01708						
02							
03							
04							
05							
06							
07							
08							
09							
10							

This week SFR

CONFIDENTIAL- 17CV01708

Last week SFR

CONFIDENTIAL- 17CV01708

Feed rates up 6% from last week, good tides for feeding

## Stock Status

Unit	Closing count	Closing average weight [g]	Closing biomass [kg]	Closing real density [kg/m <sup>3</sup> ]	TGC in period
01	CONFIDENTIAL- 17CV01708				
02					
03					
04					
05					
06					
07					
08					
09					
10					

Closing Avges Wt.	Opening Avg Wt.	% Growth
2,527.80	2,490.30	2

Pen	SFR in period	Last Week SFR
01	CONFIDENTIAL- 17CV01708	CONFIDENTIAL- 17CV01708
02		
03		
04		
05		
06		
07		
08		
09		
10		

CONFIDENTIAL- 17CV01708

Pen	SFR
Pen 1	CONFIDENTIAL- 17CV01708
Pen 2	
Pen 3	
Pen 4	
Pen 5	
Pen 6	
Pen 7	
Pen 8	
Pen 9	
Pen 10	

CONFIDENTIAL- 17CV01708

Samples:

0.93

Pen 1 Actual Variance Condition F. C/ys Mature%

CONFIDENTIAL- 17CV01708

Pen 2

Pen 3

Pen 4

Pen 5

## Environment

	12/4/17/18/19				
Temp	8.8				
Oxygen Average	6.1				
Oxygen Max	7.6				
Oxygen Min	5.6				

Looking good temp up a few degrees from last week

## Summary

All Lights on  
Diving on Pred net  
Samples  
General Duties

## Great

Good look at fish  
Tides

## Disappointing

Predation at the beginning of the week



## Hope Island Weekly Report

1/11-1/17/16

Unit	Accumulated input count	Average weight at input [g]	Accumulated input biomass [kg]	Opening count	Opening average weight biomass [kg]	Opening count	Opening average weight biomass [kg]	Mortality count	Mortality rate (%)	Acc. mortality	Acc. survival rate (%)
01											
02											
03											
04											
05											
06											
07											
08											
09											
10											

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Unit	Closing count	Closing average weight [g]	Closing biomass [kg]	Closing real density [kg/m <sup>3</sup> ]	Deviation # of fish (%)	Deviation in period # of fish (%)	Culled count in period	Feed used n per od [kg]	SFR n period	Calc. feed use in per od [kg]	Economical FCR n per od	Acc. economical FCR (ncl. d scards)	Gross growth (%)	SGR in period	OC in period	Accumulated TOC	Avg. temperature [°C]	Dynamic Red L	0	0
01																				
02																				
03																				
04																				
05																				
06																				
07																				
08																				
09																				
10																				
																			0.00	

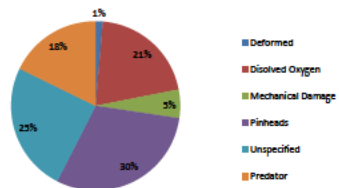
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## Mortality

Unit	Mortality count	Mortality rate (%)	Acc. mortality rate (%)	Acc. survival rate (%)
01				
02				
03				
04				
05				
06				
07				
08				
09				
10				

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Mortality Breakdown



By Cause Per Pen

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Mortality Low  
Very Light predation.

## Feeding

Unit	Feed used n per od [kg]	Closing average weight [g]	SFR in period	Calc. feed use n per od [kg]	Economical FCR n per od	Acc. economical FCR (ncl. d scards)	Previous Week SFR Comparison %
01							
02							
03							
04							
05							
06							
07							
08							
09							
10							

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This week SFR

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Last week SFR

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Feeding down slightly.  
Seals swimming around bothering fish.

## Stock Status

Unit	Closing count	Closing average weight [g]	Closing biomass [kg]	Closing real density [kg/m <sup>3</sup> ]	TOC in period
01					
02					
03					
04					
05					
06					

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Closing Avg  
WL

Opening Avg  
WL

% Growth

SFR in period Last Week SFR

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Pen 1  
Pen 2  
Pen 3  
Pen 4  
Pen 5  
Pen 6  
Pen 7  
Pen 8  
Pen 9  
Pen 10

SFR  
CONFIDENTIAL



01	CONFIDENTIAL- 17CV01708
02	
03	
04	
05	
06	
07	
08	
09	
10	
0.00	

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Fish look great! Nice fat and healthy

We started a slightly less aggressive feeding meal plan, after looking at the condition factors from samples

## Environment

	1/11-1/17/16				
Temp	8.8				
Oxygen Average	7				
Oxygen Max	8.3				
Oxygen Min	6.1				

Looking good temp up a few degrees from last week

## Summary

All Lights on  
 Diving on Pred net  
 Installed guard rails on bridges to system  
 MPI  
 General Duties

## Great

Fish are doing great!  
 New safety improvements

## Disappointing

Predation at the beginning of the week



## Hope Island Weekly Report

1/18-1/24/16

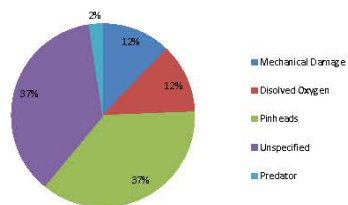
Unit	Accumulated input count	Average weight at input [g]	Accumulated input biomass [kg]	Opening count	Opening average weight	Opening biomass [kg]	Mortality count	Mortality rate [%]	Acc. mortality	Acc. survival rate [%]
01	CONFIDENTIAL- 17CV01708									
02										
03										
04										
05										
06										
07										
08										
09										
10										

Unit	Closing count	Closing average weight [g]	Closing biomass [kg]	Closing real density [kg/m <sup>3</sup> ]	Deviation, # of fish	Deviation in period, # of fish [%]	Culled count in period	Feed used in period [kg]	SFR in period	Calc. feed use in period [kg]	Economical FCR in period	Acc. economical FCR (incl. discards)	Gross growth [%]	SFR in period	TGC in period	Accumulated TGC	Avg. temperature [°C]	Dynamic Red L	0	0
01	CONFIDENTIAL- 17CV01708																			
02																				
03																				
04																				
05																				
06																				
07																				
08																				
09																				
10																				

### Mortality

Unit	Mortality count	Mortality rate [%]	Acc. mortality rate	Acc. survival rate
01	CONFIDENTIAL- 17CV01708			
02				
03				
04				
05				
06				
07				
08				
09				
10				

Mortality Breakdown



By Cause Per Pen

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Mortality Low  
Very Light predation.

### Feeding

Unit	Feed used in period [kg]	Closing average weight [g]	SFR in period	Calc. feed use in period [kg]	Economical FCR in period	Acc. economical FCR (incl. discards)	Previous Week SFR Comparison %
01	CONFIDENTIAL- 17CV01708						
02							
03							
04							
05							
06							
07							
08							
09							
10							

This week SFR

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Last week SFR

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Feeding going well  
Pen 10 was being harassed by seals

### Stock Status

Unit	Closing count	Closing average weight [g]	Closing biomass [kg]	Closing real density [kg/m <sup>3</sup> ]	TGC in period
01	CONFIDENTIAL- 17CV01708				
02					
03					
04					
05					

Closing Avg  
WT

Opening Avg  
WT

% Growth

Pen  
01  
02  
03  
04  
05  
06

SFR in period  
Last Week SFR  
SFR

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Pen  
Pen 1  
Pen 2  
Pen 3  
Pen 4  
Pen 5  
Pen 6  
Pen 7  
Pen 8  
Pen 9  
Pen 10

SFR  
CONFIDENTIAL- 17CV01708

01	
02	
03	
04	
05	
06	
07	
08	
09	
10	
0.00	

Fish look great! Nice fat and healthy

We started a slight bleed. We saw some predation on the fish from the predators. We will take factors from samples

Samples:

Pen 2	
Pen 5	
Pen 7	

All samples above 0.00

## Environment

	1/18-1/24/18				
Temp	6.5				
Oxygen Average	7.4				
Oxygen Max	8.4				
Oxygen Min	6.3				

Better tides this week

Lots of rain

## Summary

All Lights on

Diving on Pred net

Installed guard rails on bridges to system

MPI

General Duties

Samples

## Great

Fish are doing great!

Newsafer improvements

## Disappointing

Predation at the beginning of the week very light



## Hope Island Weekly Report

1/25-1/31/16

Unit	Accumulated input count	Average weight at input [g]	Accumulated input biomass [kg]	Opening count	Opening average weight	Opening biomass [kg]	Mortality count	Mortality rate (%)	Acc. mortality	Acc. survival rate (%)
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										

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Unit	Closing count	Closing average weight [g]	Closing biomass [kg]	Closing real density [kg/m <sup>3</sup> ]	Deviation, # of fish	Deviation in period, # of fish (%)	Culled count in period	Feed used in period [kg]	SFR in period	Calc. feed use in period [kg]	Economical FCR in period	Acc. economical FCR (ind.)	Gross growth [g]	SFR in period	TGC in period	Accumulated TGC	Avg. temperature [°C]	Dynamic Red L	0	0
01																				
02																				
03																				
04																				
05																				
06																				
07																				
08																				
09																				
10																				

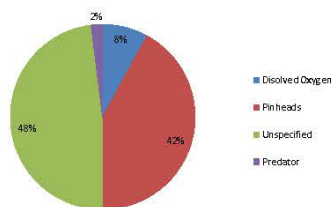
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## Mortality

Unit	Mortality count	Mortality rate (%)	Acc. mortality rate (%)	Acc. survival rate (%)
01				
02				
03				
04				
05				
06				
07				
08				
09				
10				

Mortality Low

Mortality Breakdown



By Cause Per Pen

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## Feeding

Unit	Feed used in period [kg]	Closing average weight [g]	SFR in period	Calc. feed use in period [kg]	Economical FCR in period	Acc. economical FCR (ind.)	Previous Week SFR Comparison %
01							
02							
03							
04							
05							
06							
07							
08							
09							
10							

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This week SFR

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Last week SFR

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Feeding Challenging, strong tides throughout day.

## Stock Status

Unit	Closing count	Closing average weight [g]	Closing biomass [kg]	Closing real density [kg/m <sup>3</sup> ]	TGC in period
01					
02					
03					
04					
05					
06					

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Closing Avg Wt.

Opening Avg Wt.

% Growth

Pen  
01  
02  
03  
04  
05  
06

SFR in period  
Last Week SFR  
SFR

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Pen  
Pen 1  
Pen 2  
Pen 3  
Pen 4  
Pen 5  
Pen 6  
Pen 7  
Pen 8  
Pen 9  
Pen 10

SFR

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01	CONFIDENTIAL- 17CV01708
02	
03	
04	
05	
06	
07	
08	
09	
10	
0.00	

Not the best samples out of 9 and 10, we are going to re-sample in middle of the month

Samples:

Pen 8	CONFIDENTIAL- 17CV01708
Pen 9	
Pen 10	

## Environment

	1/25-1/31/18				
Temp	6.5				
Oxygen Average	7.4				
Oxygen Max	8.4				
Oxygen Min	6.3				

Strong tides throughout day,  
Stormy with heavy rain  
salinity low all week, water ver murky

## Summary

All Lights on  
MPI  
General Duties  
Samples

## Great

Pen 8 sample

## Disappointing

Stong currents all day  
Stormy

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